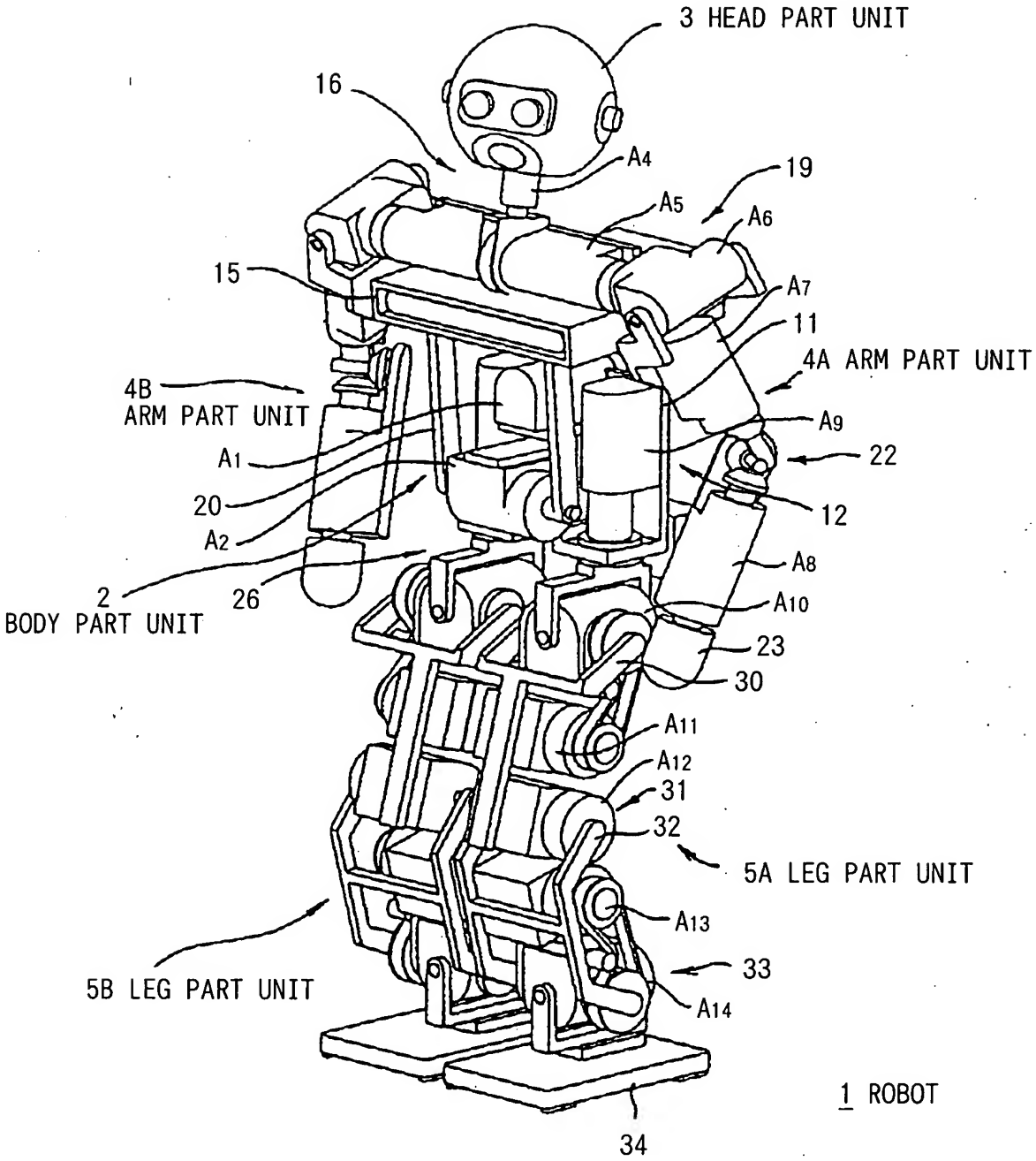
3 HEAD PART UNIT
16
A4
19
A5
A6
15
A7
11
4A ARM PART UNIT
4B
ARM PART UNIT
A9
A1
22
20
12
A2
A8
2
26
A10
BODY PART UNIT
23
30
A11
A12
31
32
5A LEG PART UNIT
A13
5B LEG PART UNIT
33
A14
1 ROBOT
34

FIG.1

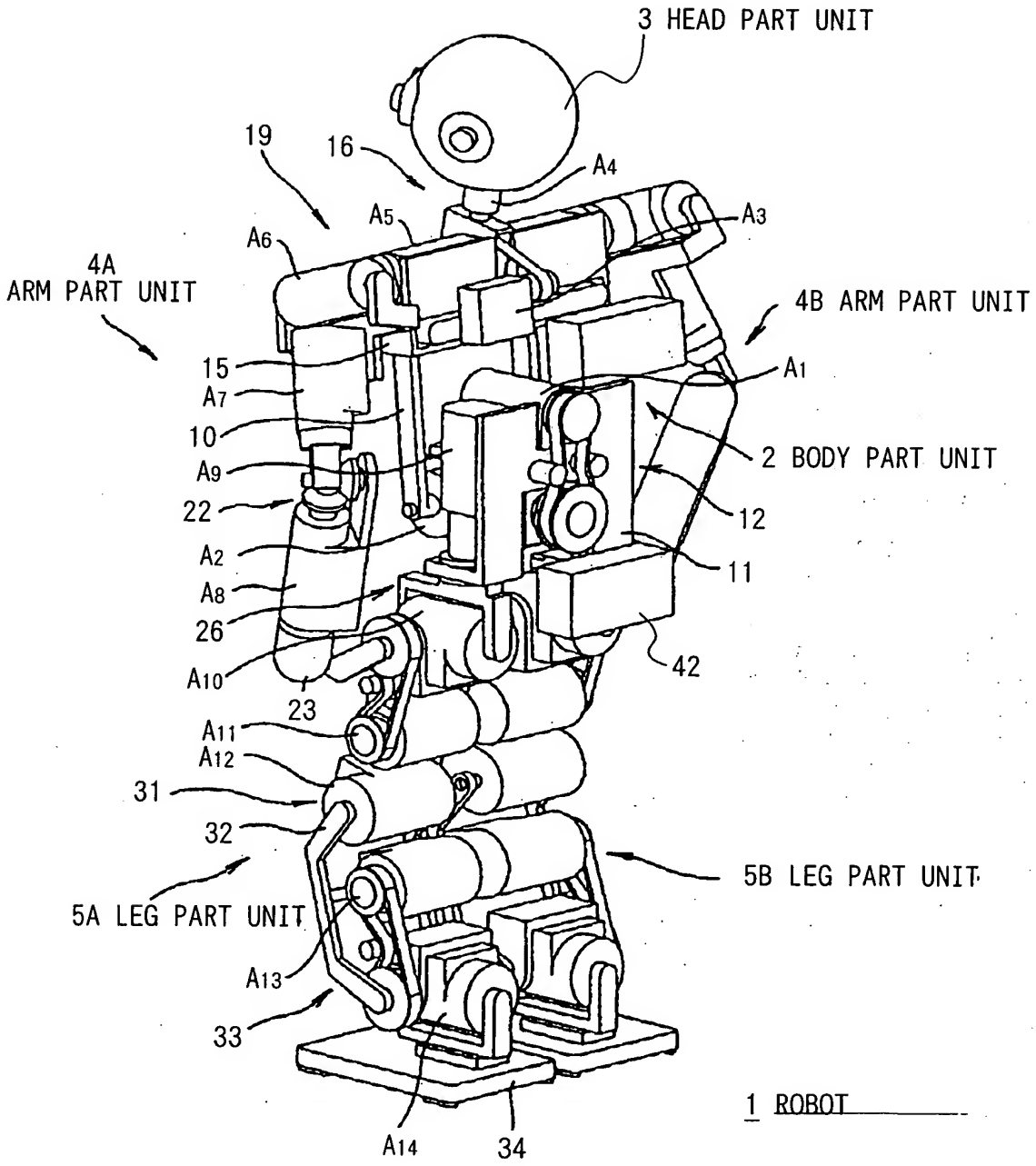
3 HEAD PART UNIT
19
16
A4
A5
A3
A6
4A
ARM PART UNIT
4B ARM PART UNIT
15
A7
A1
10
2 BODY PART UNIT
A9
22
12
A2
11
A8
26
42
A10
23
A11
A12
31
32
5B LEG PART UNIT
5A LEG PART UNIT
A13
33
1 ROBOT
A14
34

FIG. 2

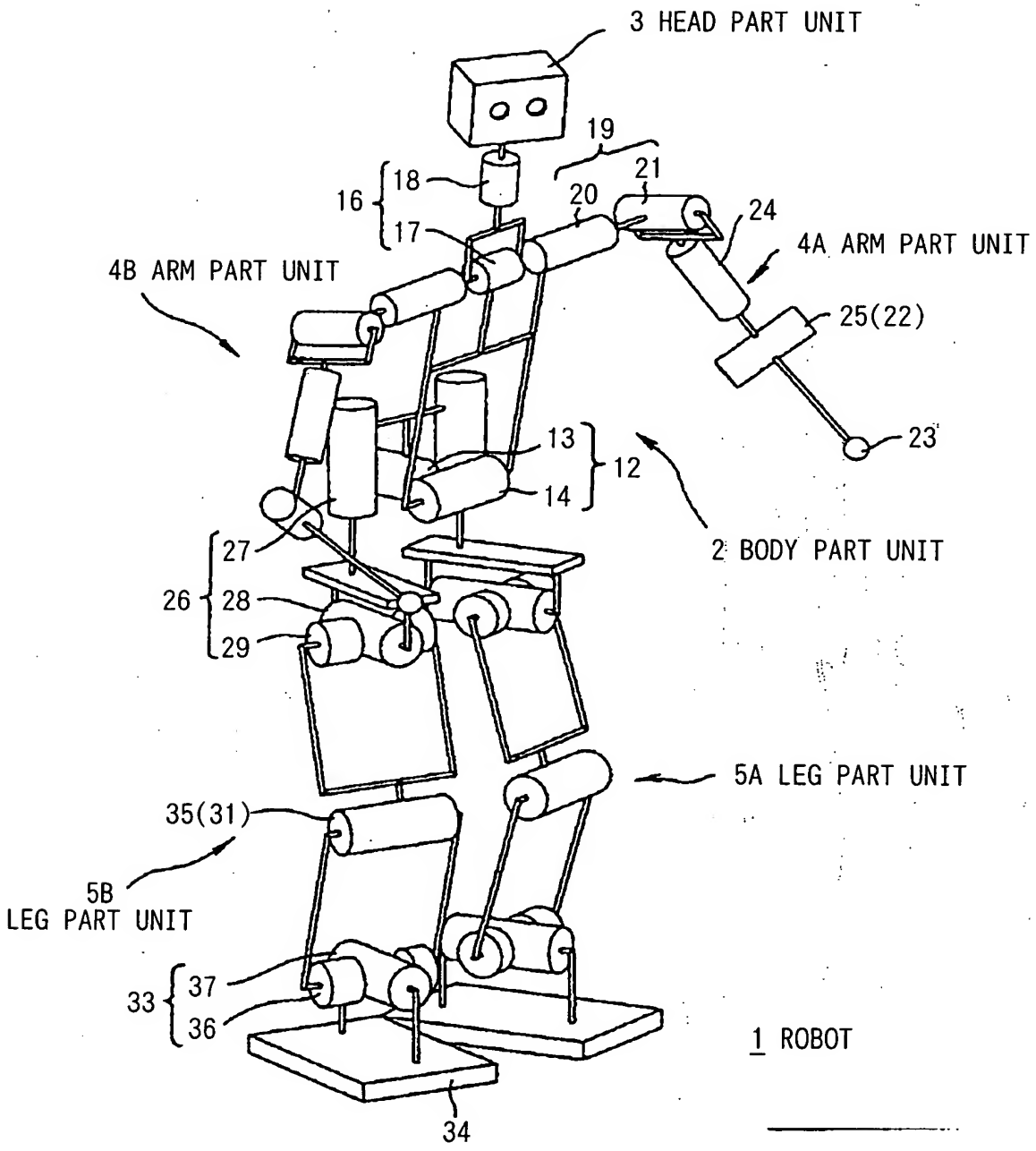
3 HEAD PART UNIT
19
21
16
18
17
20
24
4A ARM PART UNIT
4B ARM PART UNIT
25(22)
23
13
12
14
2 BODY PART UNIT
27
26
28
29
5A LEG PART UNIT
35(31)
5B
LEG PART UNIT
33
37
36
34
1 ROBOT

FIG.3

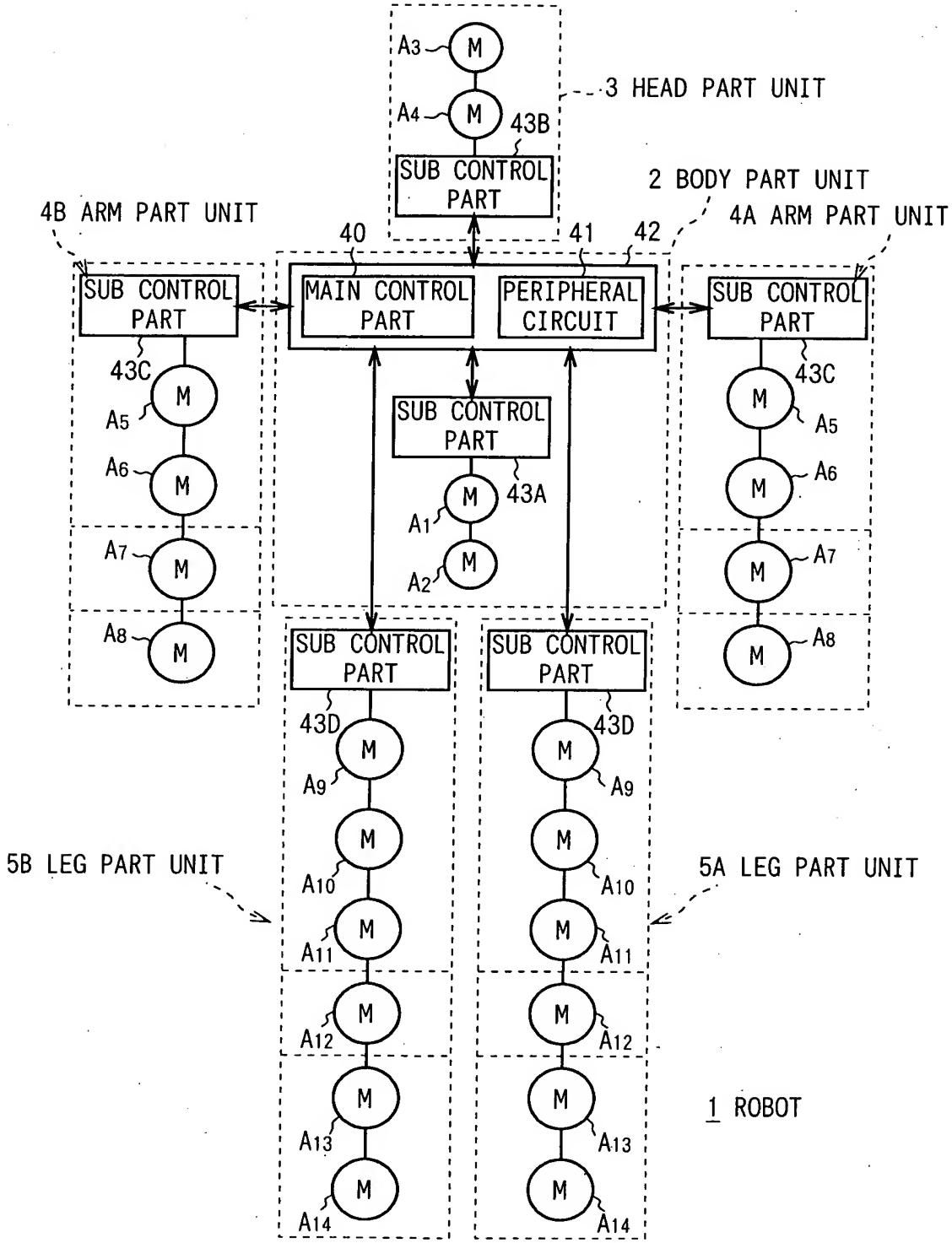
A3
M
A4
M
43B
SUB CONTROL PART
3 HEAD PART UNIT
2 BODY PART UNIT
4B ARM PART UNIT
4A ARM PART UNIT
40
41
42
SUB CONTROL PART
MAIN CONTROL PART
PERIPHERAL CIRCUIT
SUB CONTROL PART
43C
A5
A6
A7
A8
SUB CONTROL PART
43A
A1
A2
SUB CONTROL PART
SUB CONTROL PART
43D
A9
A10
A11
A12
A13
A14
5B LEG PART UNIT
5A LEG PART UNIT
1 ROBOT

FIG.4

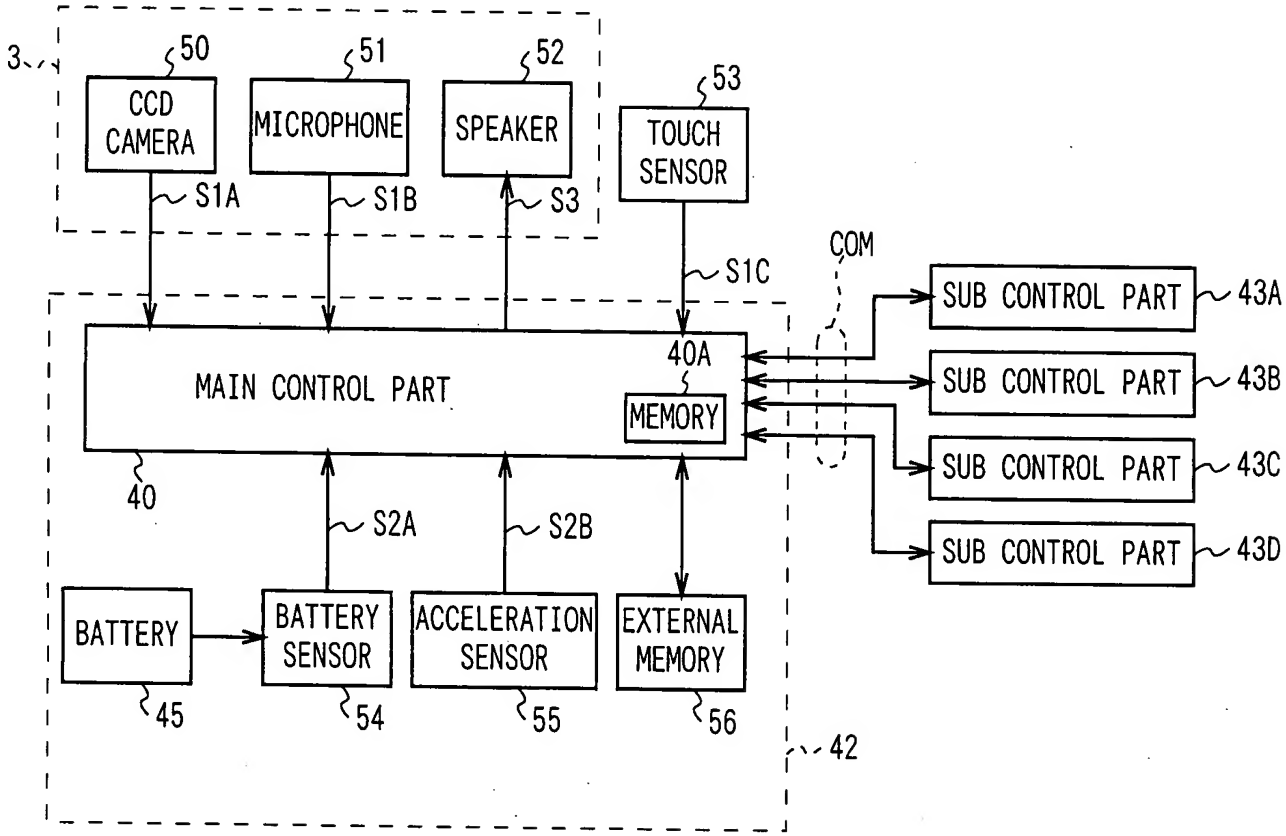
3
50
CCD CAMERA
51
MICROPHONE
52
SPEAKER
53
TOUCH SENSOR
S1A
S1B
S3
S1C
COM
SUB CONTROL PART
43A
SUB CONTROL PART
43B
SUB CONTROL PART
43C
SUB CONTROL PART
43D
40A
MAIN CONTROL PART
MEMORY
40
S2A
S2B
BATTERY
BATTERY SENSOR
ACCELERATION SENSOR
EXTERNAL MEMORY
45
54
55
56
42

FIG. 5

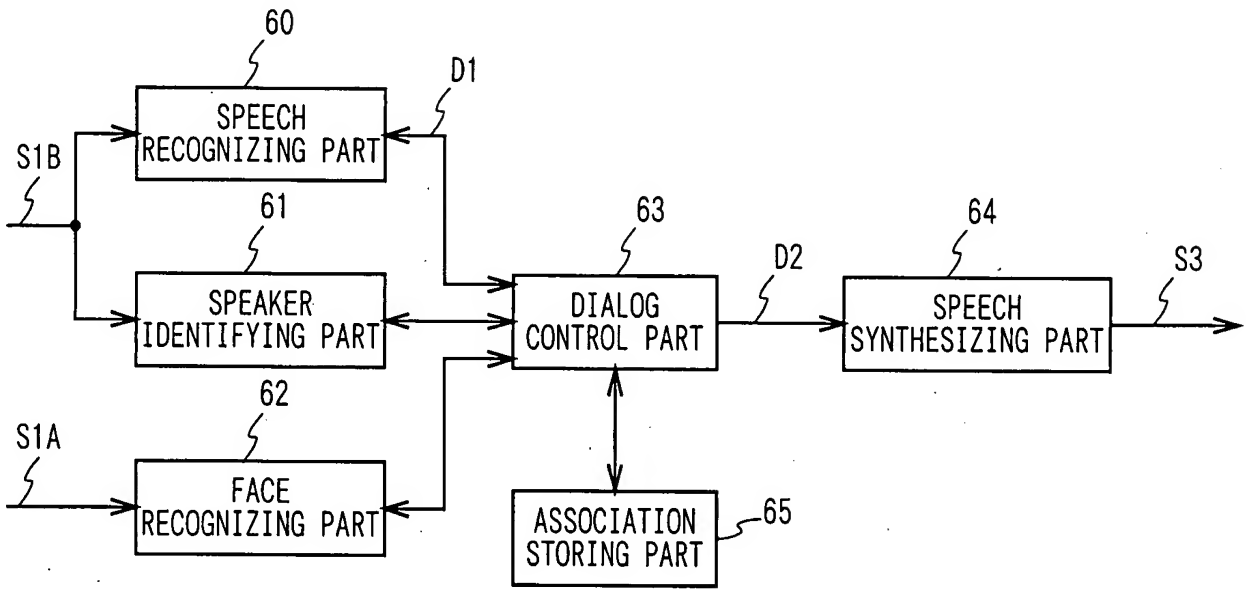

FIG. 6

F I D		S I D		NAME
1	A	2	B	ADAMS
2	C	5	B	SMITH

FIG. 7

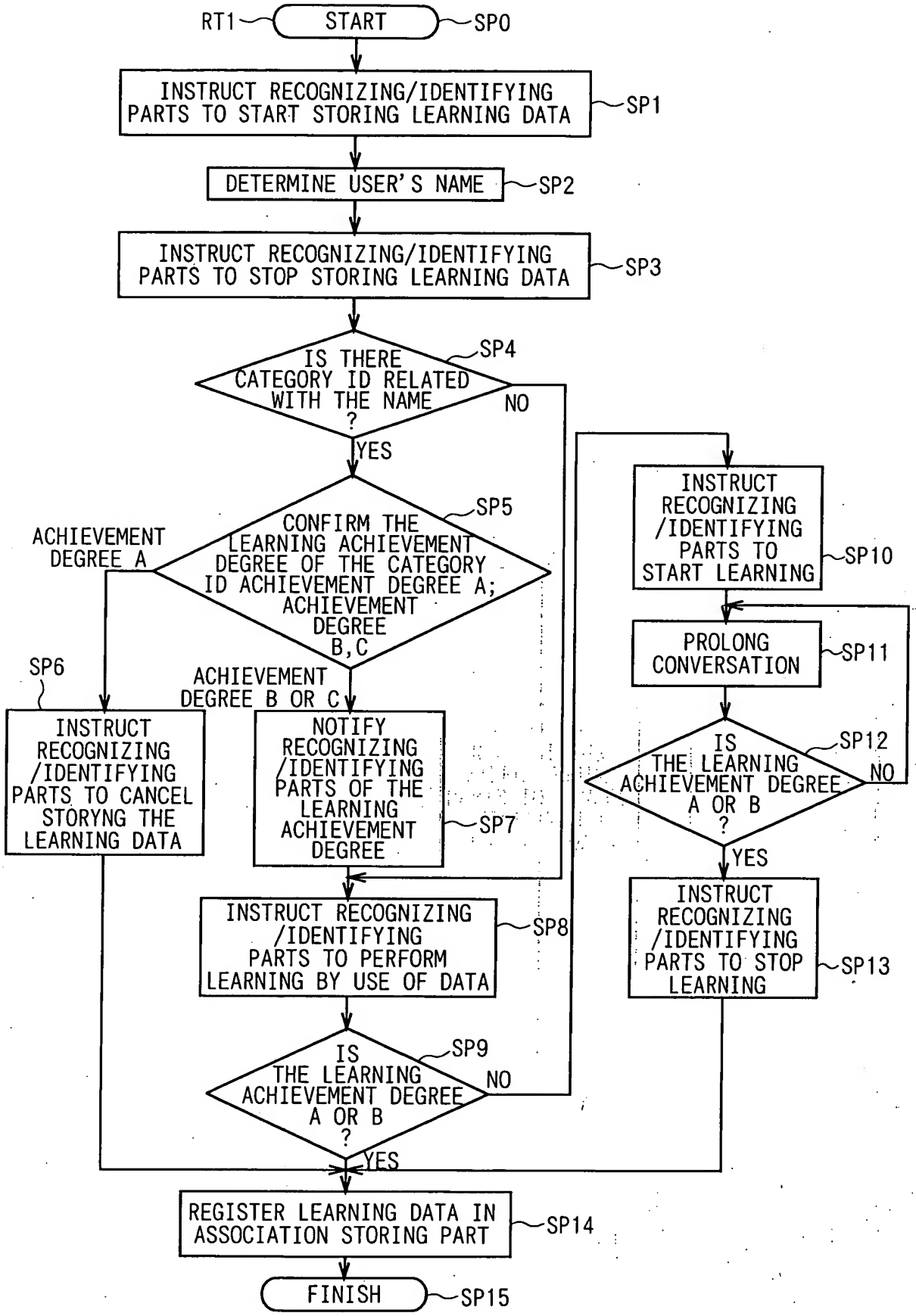
RT1
START
SP0
INSTRUCT RECOGNIZING/IDENTIFYING PARTS TO START STORING LEARNING DATA
SP1
DETERMINE USER'S NAME
SP2
INSTRUCT RECOGNIZING/IDENTIFYING PARTS TO STOP STORING LEARNING DATA
SP3
IS THERE CATEGORY ID RELATED WITH THE NAME ?
SP4
NO
YES
CONFIRM THE LEARNING ACHIEVEMENT DEGREE OF THE CATEGORY ID ACHIEVEMENT DEGREE A; ACHIEVEMENT DEGREE B,C
SP5
ACHIEVEMENT DEGREE A
ACHIEVEMENT DEGREE B OR C
SP6
INSTRUCT RECOGNIZING /IDENTIFYING PARTS TO CANCEL STORYNG THE LEARNING DATA
NOTIFY RECOGNIZING /IDENTIFYING PARTS OF THE LEARNING ACHIEVEMENT DEGREE
SP7
INSTRUCT RECOGNIZING /IDENTIFYING PARTS TO PERFORM LEARNING BY USE OF DATA
SP8
IS THE LEARNING ACHIEVEMENT DEGREE A OR B ?
SP9
NO
YES
INSTRUCT RECOGNIZING /IDENTIFYING PARTS TO START LEARNING
SP10
PROLONG CONVERSATION
SP11
IS THE LEARNING ACHIEVEMENT DEGREE A OR B ?
SP12
NO
YES
INSTRUCT RECOGNIZING /IDENTIFYING PARTS TO STOP LEARNING
SP13
REGISTER LEARNING DATA IN ASSOCIATION STORING PART
SP14
FINISH
SP15

FIG. 8

ROBOT: MAY I ASK YOUR NAME?
USER : MY NAME IS SMITH.
ROBOT: YOUR NAME IS SMITH, ISN'T IT?
USER : YES, IT IS.
ROBOT: HELLO, MR. SMITH! HOW ARE YOU?

FIG. 9

ROBOT: SHALL YOU BE MY FRIEND?
USER : SURE.
ROBOT: THANK YOU! SO CAN I ASK SOME QUESTION ABOUT YOU?
USER : OK.
ROBOT: MR. SMITH, WHAT IS YOUR FAVORITE FOOD?

FIG. 10

ROBOT: MAY I ASK YOUR NAME?
USER : MY NAME IS SMITH.
ROBOT: YOUR NAME IS SMITH, ISN'T IT?
USER : YES, IT IS.
ROBOT: OH, MR. SMITH! I HAVE MET YOU ONCE.

FIG. 12

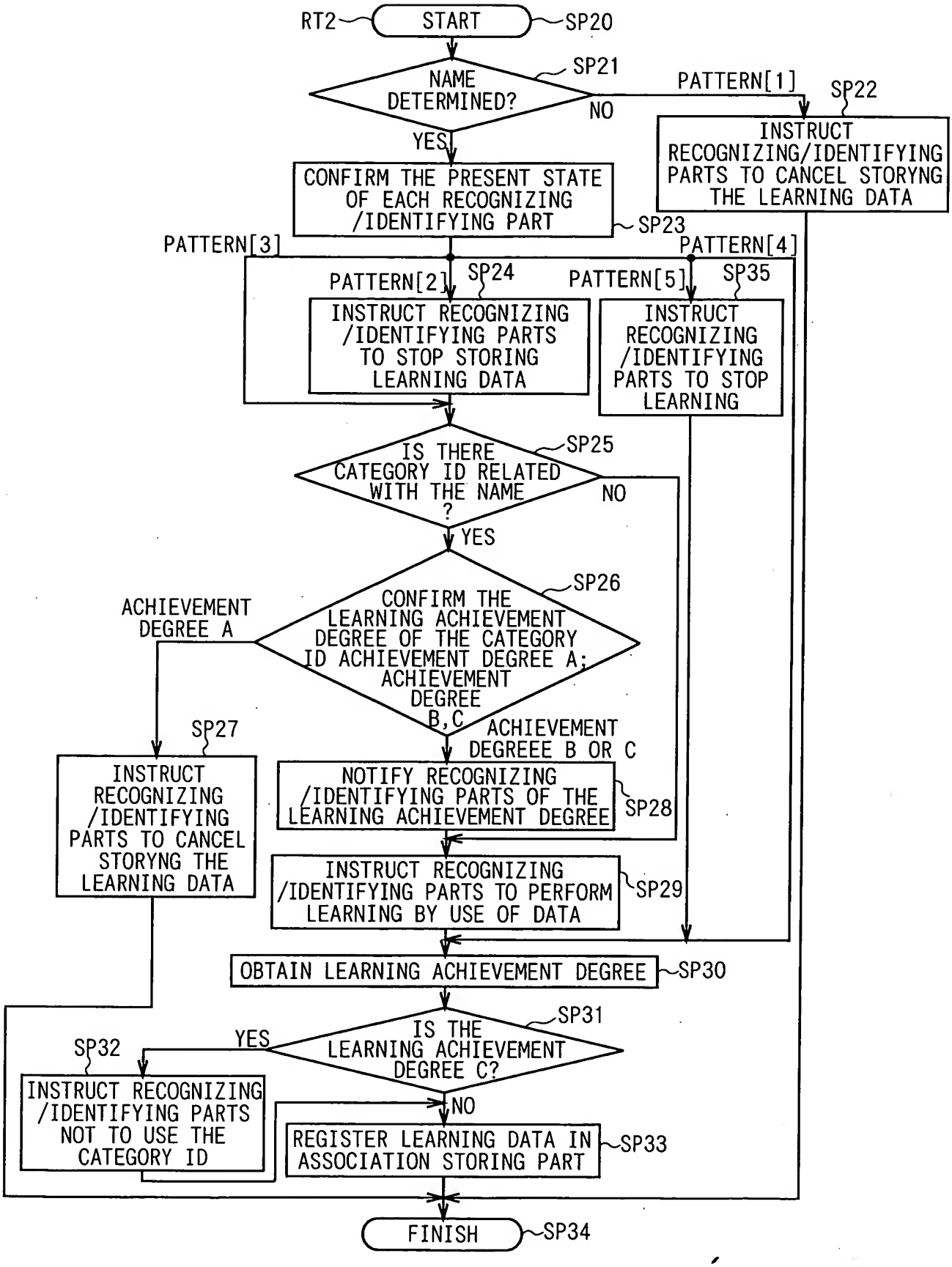
RT2
START
SP20
NAME DETERMINED?
SP21
NO
PATTERN[1]
SP22
INSTRUCT RECOGNIZING/IDENTIFYING PARTS TO CANCEL STORYNG THE LEARNING DATA
YES
CONFIRM THE PRESENT STATE OF EACH RECOGNIZING /IDENTIFYING PART
SP23
PATTERN[3]
PATTERN[4]
PATTERN[2]
SP24
PATTERN[5]
SP35
INSTRUCT RECOGNIZING /IDENTIFYING PARTS TO STOP STORING LEARNING DATA
INSTRUCT RECOGNIZING /IDENTIFYING PARTS TO STOP LEARNING
IS THERE CATEGORY ID RELATED WITH THE NAME ?
SP25
NO
YES
CONFIRM THE LEARNING ACHIEVEMENT DEGREE OF THE CATEGORY ID ACHIEVEMENT DEGREE A; ACHIEVEMENT DEGREE B,C
SP26
ACHIEVEMENT DEGREE A
ACHIEVEMENT DEGREEE B OR C
SP27
INSTRUCT RECOGNIZING /IDENTIFYING PARTS TO CANCEL STORYNG THE LEARNING DATA
NOTIFY RECOGNIZING /IDENTIFYING PARTS OF THE LEARNING ACHIEVEMENT DEGREE
SP28
INSTRUCT RECOGNIZING /IDENTIFYING PARTS TO PERFORM LEARNING BY USE OF DATA
SP29
OBTAIN LEARNING ACHIEVEMENT DEGREE
SP30
IS THE LEARNING ACHIEVEMENT DEGREE C?
SP31
YES
SP32
INSTRUCT RECOGNIZING /IDENTIFYING PARTS NOT TO USE THE CATEGORY ID
NO
REGISTER LEARNING DATA IN ASSOCIATION STORING PART
SP33
FINISH
SP34

FIG. 11